EBIO 330: Insect Biology Lab

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Course Website: https://owlspace-ccm.rice.edu/portal/site/EBIO-330-001-F15

Overview
This one-credit laboratory course focuses on understanding the biology of the world's most diverse animal group—the insects—through collection, curation, and identification of specimens in natural and urban environments. All students enrolled in EBIO 330 must have previously taken or be simultaneously enrolled in EBIO 326 (Insect Biology lecture).

Course Learning Goals
By the end of the course, students are expected to know:

- the distinguishing characteristics of major insect groups;
- how entomological collections contribute to agricultural, ecological, and medical research;
- why insects are important including their ecological, economic, and cultural value; and
- how insect diversity is distributed both globally and locally.

By the end of the course, students are expected to be able to:

- use appropriate field techniques for collecting and preserving insects;
- prepare insect specimens for identification using techniques appropriate for each group;
- use a dichotomous key to identify insects to order and in some cases to family, subfamily, genus, and species;
- use targeted insect collections to assess the species diversity of insects in natural and urban environments; and
- create a scientific report that is consistent with published peer-reviewed journal articles in terms of their format, terminology, grammar, tables, figures, and citations.

Location and time
Scheduled class meetings are Friday afternoons from 1 – 4 PM in ABL 125. One on-campus and two off-campus collecting trips will provide opportunities for students to add to their collections. **Attendance in all collecting trips is mandatory.** We will also visit the entomology collection at Texas A&M University; **attendance on this fieldtrip is also mandatory**. On off-campus collecting trip days (see schedule below) we will meet in ABL 125 at **noon** and return by 7 PM. Details regarding fieldtrips will be discussed during the first class meeting.

Textbook
The lab practical exam and all insect identification are based on the following text (a few copies are available in the lab but students are encouraged to purchase their own copy): Triplehorn, C. A., & Johnson, N. F. (2005). *Borror and DeLong's Introduction to the Study of Insects* Belmont, CA: Thomson Brooks/Cole.

Students with Disabilities
If you have a disability that will impact your work in this class, please speak with me during the first two weeks of class. All discussions will remain confidential. Additionally, you must contact Disability Support Services (http://dss.rice.edu/) located in the Allen Center, Room 111.

Assignments
More detailed instructions for the assignments described below may be found on our Owl-space website.

- **Insect collections -** Students work in teams of two or three to assemble a collection of insects that they personally collect (i.e. not obtained from another person) and identify to Family (or below). Guidance is provided but it is expected that much of the work for the collection is executed independently. It is further expected that all members of a team contribute equally to the collection; failure to contribute one's fair share influences one's participation grade. All members of a team receive the same grade for their collection. Students enrolled in EBIO 330 will have access to ABL 125 and the insect collection materials therein. Collection materials that leave the lab must be signed out and signed back in.

- **Written report –** Students work in groups to survey the species diversity of targeted groups of insects at particular sites that we visit as a class. A report written in the format summarizes the species that were collected and the distribution of native and non-native species and is shared with each site's managers to help to inform land use and conservation practices.

- **Lab practical exam –** The lab practical exam involves the identification of insect specimens based on students' knowledge of basic insect taxonomy and their ability to use a dichotomous key.

Grading
Late assignments will be penalized by 10% of the original point value per 24 hours late.

ASSIGNMENT	POINTS	% OF FINAL GRADE
Insect collection	200	40%
Written report	100	20%
Lab practical exam	100	20%
Participation	100	20%
TOTAL	**500**	**100%**

Course schedule (subject to change)

Date	Activity (subject to change)	Location
28-Aug	Introductory meeting	ABL 125
4-Sep	Intro to collection methods	Campus
11-Sep	Curation workshop	ABL 125
18-Sep	Identification workshop 1	ABL 125
25-Sep	**Off-campus collecting trip 1**	Memorial Park
2-Oct	Identification workshop 2	ABL 125
9-Oct	Identification workshop 3	Cook's Branch
16-Oct	**Off-campus collecting trip 2**	ABL 125
23-Oct	Work on collections	ABL 125
30-Oct	Lab practical exam	ABL 125
6-Nov	Scientific writing workshop	ABL 125
13-Nov	Work on collections	ABL 125
20-Nov	**Fieldtrip to TAMUIC**; **reports due**	College Station, TX
27-Nov	No class (Thanksgiving)	
4-Dec	**Collections due**, lab party	ABL 125

Honor Code

Collaboration with classmates is encouraged in this class. However, any use of outside resources (including published and unpublished research, websites, or personal communication) should be clearly communicated to the instructor. Any questions about a potential violation of the Rice University Honor Code should be brought to the instructor's attention immediately.